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Frank J. Cuccias

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EXAMINER

SELBY, GEVELL V

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/616,860	Applicant(s) CUCCIAS, FRANK J.	
	Examiner Gevell Selby	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23, 25-32 and 34-39 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40, 41, 44-47 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see the amendment, filed 5/9/07, with respect to the rejection(s) of claim(s) 31, 32, 34-39 under 35 U.S.C. 102 rejections have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nakano et al., 5,986,767.
2. Applicant's arguments, see the amendment, filed 5/9/07, with respect to claims 40, 41, and 44-46 have been fully considered and are persuasive. The 35 U.S.C. 102 rejections of claims 40, 41, and 44-46 have been withdrawn.
3. Applicant's arguments filed 5/9/07 have been fully considered but they are not persuasive. The applicant submits the prior art does not disclose the following limitations of the claimed invention:

1) an infrared illumination source operable to transmit infrared optical energy in the direction of a subject when an ambient infrared light level is determined to be insufficient, as stated in claim 1. The Examiner respectfully disagrees.

Examiner's Reply

Re claims 1 and 31) In response to applicant's argument that the illumination source is "operable to transmit infrared optical energy in the direction of a subject when an ambient infrared light level is determined to be insufficient", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

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The Scaduto reference discloses a light source 10 that produces a broad band spectrum of light (see column 6, lines 9-15) including producing infrared light, since the filter 30 filters the infrared light produced by the light source 10 (see column 6, lines 15-25). Since the light source 10 always transmits a broad spectrum of light including infrared, it is operable to transmit infrared optical energy in the direction of a subject when an ambient infrared light level is determined to be insufficient or any other time.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-4, 12, 15, 20-23, 25, 27, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Scaduto, US 6,429,936.**

In regard to claim 1, Scaduto, US 6,429,936, discloses an infrared camera system comprising:

an infrared illumination source (see figure 6, element 10 and column 6, lines 9-25: light source 10 that produces a broad band spectrum of including producing infrared light, since the filter 30 filters the infrared light produced by the light source 10) wherein it is inherent the infrared illumination source of the Scaduto reference is operable to transmit infrared optical energy in the direction

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of a subject when an ambient infrared light level is determined to be insufficient, since the structure is disclosed);

a lens (see figure 6, element 230) configured to collect optical energy conveyed from a subject;

a filter (see figure 6, elements 110 and 210) providing a plurality of pass bands associated with different center wavelengths within an infrared portion of the electromagnetic spectrum, said filter being operable to pass filter optical energy collected by said lens in accordance with any selected one of its plurality of pass bands (see column 6, lines 24-29 and column 8, lines 2-8: plurality of bandpass filters range from 200-1000 nm);

an optical detector (see figure 6, element 261) operable to generate an electrical signal representing an image of the subject in response to optical energy collected by said lens, pass filtered by said filter in accordance with a desired pass band selectable from among the plurality of pass bands, and subsequently incident on said optical detector (see column 8, lines 30-40); and

a control device (see figure 6, elements 270 and 280) operable to select the desired pass band from among the plurality of pass bands provided by said filter (see column 8, lines 62-66 and column 10, lines 19-21 and 53-63: the control device controls the movement of the filter wheel to selective the appropriate filter).

In regard to claim 2, Scaduto, US 6,429,936, discloses the system of claim 1 wherein at least two of the pass bands of said filter overlap (see column 8, lines 5-8).

In regard to claim 3, Scaduto, US 6,429,936, discloses the system of claim 1 wherein none of the pass bands of said filter overlap (see column 8, lines 15-19: each filter may be selected to pass different wavelengths of light so that none overlap).

In regard to claim 4, Scaduto, US 6,429,936, discloses the system of claim 1 wherein said filter comprises:

a plurality of separate filters (see figure 6, elements 212) having fixed pass bands (see column 8, lines 2-4); and

a switching device (see figure 6, element 200) operable to interpose each of said filters in an optical pathway between said lens and said optical detector (see column 9, lines 33-50).

In regard to claim 12, Scaduto, US 6,429,936, discloses the system of claim 1 wherein said filter comprises:

a filter disk (see figure 6, element 210) having a plurality of individual filter windows (see figure 6, element 212), each said filter window having a fixed pass band associated with a different center wavelength (see column 8, lines 16-18), said disk being configured for rotation about an axis thereof to interpose a selected one of said filter windows in an optical pathway between said lens and said optical detector (see column 8, lines 2-4).

In regard to claim 15, Scaduto, US 6,429,936, discloses the system of claim 12 wherein it is implied the pass band of each said filter window comprises ± 20 nm from the center wavelength thereof, since the filter allows a single wavelength (see column 8, lines 4-5).

In regard to claim 20, Scaduto, US 6,429,936, discloses the system of claim 1 wherein said optical detector comprises a charge-couple-device (see figure 6, element 261).

In regard to claim 21, Scaduto, US 6,429,936, discloses the system of claim 1 wherein said control device comprises a microprocessor (see figure 6, element 280).

In regard to claim 22, Scaduto, US 6,429,936, discloses the system of claim 21 wherein said microprocessor selects the desired pass band based on at least one of an ambient visible light level and an ambient infrared light level (see column 6, lines 25-27).

In regard to claim 23, Scaduto, US 6,429,936, discloses the system of claim 22 further comprising:

a visible light sensor (see figure 6, element 261: the CDD serves as a visible light sensor) operable to measure the ambient visible light level; and
an infrared light sensor (see figure 6, element 261: the CDD serves as an infrared light sensor) operable to measure the ambient infrared light level.

In regard to claim 25, Scaduto, US 6,429,936, discloses the system of claim 21 wherein said lens comprises an auto-focus lens (see figure 6, element 230) controllable by said microprocessor, and wherein said microprocessor adjusts said auto-focus lens in order to focus the image of the subject on said optical detector based on a distance between said auto-focus lens and the subject.

In regard to claim 27, Scaduto, US 6,429,936, discloses the system of claim 21 wherein said microprocessor is operable to convert the electrical signal generated by

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said optical sensor into a video signal (see figure 6, element 261, SIGNAL OUT to display 263).

In regard to claim 28, Scaduto, US 6,429,936, discloses the system of claim 27 further comprising at least one video connector for outputting the video signal via a wired connection (see figure 6, element 261, SIGNAL OUT to display 263).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 5, 6, 13, 14, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scaduto, US 6,429,936.

In regard to claim 5, Scaduto, US 6,429,936, discloses the system of claim 4. The Scaduto reference does not disclose wherein said plurality of separate filters specifically comprises first, second, third and fourth filters having pass bands centered around center wavelengths of 700 nm, 800 nm, 900 nm, and 1000 nm, respectively; however, the reference does disclose that the filters may be selected with so as to pass different wavelengths of light of any combination thereof (see column 8, lines 15-19).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, to have first, second, third and fourth filters having pass bands centered around center wavelengths of 700 nm,

800 nm, 900 nm, and 1000 nm, respectively, in order to have the optimum wavelength ranges depending on the experiment and the sample.

In regard to claim 6, Scaduto, US 6,429,936, discloses the system of claim 5 wherein it is implied the pass band of each of said first, second, third and fourth filters of the Scaduto reference are +/- 20 nm from the center wavelength thereof, since the filter allows a single wavelength (see column 8, lines 4-5).

In regard to claim 13, Scaduto, US 6,429,936, discloses the system of claim 12. The Scaduto reference does not disclose wherein the center wavelengths of the pass bands of said filter windows vary from a shorter wavelength to a longer wavelength in predetermined increments; however, the reference does disclose that the filters may be selected with so as to pass different wavelengths of light of any combination thereof (see column 8, lines 15-19).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, to have the center wavelengths of the pass bands of said filter windows vary from a shorter wavelength to a longer wavelength in predetermined increments, in order to have the optimum wavelength ranges depending on the experiment and the sample.

In regard to claim 14, Scaduto, US 6,429,936, discloses the system of claim 13. The Scaduto reference does not disclose wherein the shorter wavelength is 700 nm, the longer wavelength is 1000 nm, and the predetermined increments are 10 nm; however, the reference does disclose that the filters may be selected with so as to pass different wavelengths of light of any combination thereof (see column 8, lines 15-19).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, the shorter wavelength is 700 nm, the longer wavelength is 1000 nm, and the predetermined increments are 10 nm, in order to have the optimum wavelength ranges at uniform increments depending on the experiment and the sample.

In regard to claim 29, Scaduto, US 6,429,936, discloses the system and method of claim 27. The Scaduto reference does not disclose further comprising a wireless transmitter for outputting the video signal via a wireless connection.

The Official Notice taken in the previous office action stating that is well known in the art to have a camera comprising a wireless transmitter for outputting the video signal via a wireless connection, in order to transfer data to a remote location while remaining completely mobile and eliminating the need for connection cables is taken as prior art. Since the applicant has not timely traversed the old and well known statement, the above is now considered admitted prior art. See MPEP 2144.03 (c).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, to have a wireless transmitter for outputting the video signal via a wireless connection, in order to provide the user with more freedom to operate while allowing data to be transmitted to remote locations.

In regard to claim 30, Scaduto, US 6,429,936, discloses the system of claim 29. The Scaduto reference discloses wherein said wireless transmitter comprises an 802.11 wireless transmitter.

The Official Notice taken in the previous office action stating that is well known in the art to have a camera comprising a 802.11 wireless transmitter for outputting the video signal via a wireless connection, in order to transfer data to a remote location while remaining completely mobile and eliminating the need for connection cables is taken as prior art. Since the applicant has not timely traversed the old and well known statement, the above is now considered admitted prior art. See MPEP 2144.03 (c).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, to have said wireless transmitter comprises an 802.11 wireless transmitter, in order to provide the user with more freedom to operate while allowing data to be transmitted to remote locations

2. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scaduto, US 6,429,936, in view of Noemer et al, US 3,661,458.

In regard to claim 7, Scaduto, US 6,429,936, discloses the system of claim 4 wherein each said separate filter comprises glass retained within a ring (see figure 6, element 212 and column 6; lines 36-38); however, the Scaduto reference does not that the glass filter is retained in a metal ring.

Noemer et al, US 3,661,458, discloses a device with optical glass filters (see figure 1, elements 103a and 104a) retained within a metal ring (see figure 1, element 103 and 104) that are pivoted in and out of the optical axis by hinges (see figure 1, elements 5 and 6 and abstract).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, in view of Noemer et al, US 3,661,458, to have the glass filter retained in a metal ring, in order to pivot a plurality of filters in and out of the optical path, thus making the system more compact.

In regard to claim 8, Scaduto, US 6,429,936, in view of Noemer et al, US 3,661,458, discloses the system of claim 7. The Noemer reference discloses wherein said separate filters are coupled with said switching device by a hinge attached to said metal ring, said switching device being operable to pivot said filters about said hinge in order to selectively interpose said filters into said optical pathway (see abstract).

3. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scaduto, US 6,429,936, in view of Bos et al., US 6,667,471.

In regard to claim 9, Scaduto, US 6,429,936, discloses the system of claim 1 wherein said filter comprises:

filter pane interposed in an optical pathway between said lens and said optical detector (see column 7, line 59 to column 8, line 4 and lines 30-37).

The Scaduto reference does not disclose wherein said filter pane provides a pass band having a center wavelength that is adjustable over a range of wavelengths in response to a voltage level applied thereto.

Bos et al., US 6,667,471, discloses an imaging system with a electro-optic filter (see figure 8, element 118) provides a pass band having a center wavelength that is adjustable over a range of wavelengths in response to a voltage level applied thereto (see column 11, lines 35-39).

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It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, in view of Bos et al., US 6,667,471, wherein said filter pane provides a pass band having a center wavelength that is adjustable over a range of wavelengths in response to a voltage level applied thereto, in order to reduce the size and number of mechanical parts of the filtering mechanism.

In regard to claim 10, Scaduto, US 6,429,936, in view of Bos et al., US 6,667,471, discloses the system of claim 9. The Scaduto reference discloses wherein the range of wavelengths over which the center wavelength of the pass band of said filter pane is adjustable in ranges from a center wavelength of 700 nm to a center wavelength of 1000 nm (see column 6, lines 24-26: 700-1000 nm is within the 200-1000 nm range).

In regard to claim 11, Scaduto, US 6,429,936, in view of Bos et al., US 6,667,471, discloses the system of claim 10, wherein it is implied by the Scaduto reference that the pass band of said filter pane comprises +/- 20 nm from the center wavelength thereof, since the filter allows a single wavelength (see column 8, lines 4-5).

4. Claims 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scaduto, US 6,429,936, in view of Nakano et al., US 5,986,767.

In regard to claim 16, Scaduto, US 6,429,936, discloses the system and method of claim 1, respectively, wherein said filter comprises:

a filter disk (see figure 6, element 210) having a plurality of individual filter windows (see figure 6, element 212), each said filter window having a fixed pass band associated with a different center wavelength (see column 8, lines 16-18), said disk being

configured for rotation about an axis thereof to interpose a different section of said filter disk in an optical pathway between said lens and said optical detector (see column 8, lines 2-4).

The Scaduto reference does not disclose a filter disk having a pass band associated with a center wavelength that varies in a continuous manner proceeding around a circumference of said disk.

Nakano et al., US 5,986,767, discloses a camera system with a filter disk (12) having a pass band associated with a center wavelength that varies in a continuous manner proceeding around a circumference of said disk (see figure 22C and column 1, lines 54-59).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, in view of Nakano et al., US 5,986,767, to have a pass band associated with a center wavelength that varies in a continuous manner proceeding around a circumference of said disk, in order to in order to have an inexpensive color classification apparatus having a simple arrangement.

In regard to claim 17, Scaduto, US 6,429,936, in view of Nakano et al., US 5,986,767, discloses the system of claim 16 wherein the center wavelength of the pass band of said filter disk varies from a shorter wavelength to a longer wavelength in a predetermined increment over a predetermined distance measured along the circumference of said filter disk (see fig. 22A and 22C).

In regard to claim 19, Scaduto, US 6,429,936, in view of Nakano et al., US 5,986,767, discloses the system of claim 16 wherein implied by the Nakano reference that

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the pass band of said filter disk comprises +/- 5 nm from the center wavelength thereof, since the filter allows a single wavelength for is section (see figures 22a and 22c).

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scaduto, US 6,429,936, in view of Shahar et al., US 6,124,934.

In regard to claim 26, Scaduto, US 6,429,936, discloses the system of claim 25. The Scaduto reference does not disclose further comprising a distance sensor operable to measure the distance between said auto-focus lens and the subject.

Shahar et al., US 6,124,934, discloses a camera system with a distance measure means for measuring the distance between said auto-focus lens and the subject (see abstract).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, in view of Shahar et al., US 6,124,934, to have a distance sensor operable to measure the distance between said auto-focus lens and the subject, in order to provide a more stable and accurate distance measuring system to better focus the lens.

6. Claims 31, 32, 34-36, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768.

In regard to claim 31, Nakano et al., US 5,986,767, discloses a method of obtaining an image of a subject, said method comprising the steps of:

collecting optical energy conveyed from the subject (see column 12, lines see column 12, lines 40-41);

selecting a desired one of a plurality of pass bands associated with a filter, wherein each pass band has a center wavelength associated therewith (see column 12, lines 38-40);

filtering the collected optical energy in accordance with the selected pass band of the filter (see column 12, lines 60-63); and

generating an electrical signal representing an image of the subject from the filtered optical energy (see column 12, lines 40-43).

The Nakano reference does not disclose the center wavelengths being within an infrared portion of the electromagnetic spectrum; measuring an ambient infrared light level; or operating an infrared illumination source to transmit infrared optical energy in the direction of the subject when the measured ambient infrared light level is insufficient.

Scaduto, US 6,429,936, discloses an imaging system with a filter wheel wherein the center wavelengths being within an infrared portion of the electromagnetic spectrum; measuring an ambient infrared light level (see column 6, lines 24-29).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, to have the center wavelengths being within an infrared portion of the electromagnetic spectrum, in order to produce a high quality image in a wider range of the light spectrum.

Harrison, US 5,051,768, discloses an illumination source operable to transmit optical energy in the direction of the subject when the ambient infrared light level

measured by said infrared light sensor is determined by said microprocessor to be insufficient (see column 10, line 49 to column 11, line 10).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, to measure an ambient infrared light level and operate an infrared illumination source to transmit infrared optical energy in the direction of the subject when the measured ambient infrared light level is insufficient, in order to automatically maintain sufficient lighting to capture the desired object.

In regard to claim 32, Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, discloses the method of claim 31. The Nakano reference discloses wherein said step of selecting includes the steps of:

measuring an ambient visible light level (see figure 1, element 103 and column 12, lines 40-41: the CDD serves as a visible light sensor measuring the light);

choosing a pass band based on at least one of the measured ambient visible light level and the measured ambient infrared light level (see column 12, line 60 to column 13, line 25).

In regard to claim 34, Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, discloses the method of claim 31. The Nakano reference discloses further comprising:

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converting the electrical signal to a video signal (see column 12, lines 40-43); and

transmitting the video signal via a wired communications link (see figure 1, element 114, output signal line to display 114).

In regard to claim 35, Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, discloses the system and method of claim 27. The Nakano, Scaduto, and Harrison references do not disclose further comprising a wireless transmitter for outputting the video signal via a wireless connection.

The Official Notice taken in the previous office action stating that is well known in the art to have a camera comprising a wireless transmitter for outputting the video signal via a wireless connection, in order to transfer data to a remote location while remaining completely mobile and eliminating the need for connection cables is taken as prior art. Since the applicant has not timely traversed the old and well known statement, the above is now considered admitted prior art. See MPEP 2144.03 (c).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Scaduto, US 6,429,936, to have a wireless transmitter for outputting the video signal via a wireless connection, in order to provide the user with more freedom to operate while allowing data to be transmitted to remote locations.

In regard to claim 36, Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, discloses the method of claim 31. The Nakano reference discloses wherein said step of selecting includes the step of:

sending a control signal to a switching system directing the switching system to interpose one of a plurality of separate filters having fixed pass bands in an optical pathway between a lens employed in said step of collecting and an optical detector employed in said step of generating (see column 12, lines 60-63 and column 13, lines 22-25).

In regard to claim 38, Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, discloses the method of claim 31. The Nakano reference discloses wherein said step of selecting includes the step of:

rotating a filter disk having a plurality of individual fixed pass band filter windows associated with a different center wavelengths to interpose an appropriate one of the filter windows in an optical pathway between a lens employed in said step of collecting and an optical detector employed in said step of generating (see column 12, lines 60-63 and column 13, lines 22-25).

In regard to claim 39, Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, discloses method of claim 31. The Nakano reference discloses respectively, wherein said filter comprises:

rotating a filter disk having a pass band associated with a center wavelength that varies in a continuous manner proceeding around the circumference of the disk to interpose an appropriate section of the filter disk in

an optical pathway between a lens employed in said step of collecting and optical detector employed in said step of generating (see figure 22C and column 1, lines 54-59).

7. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, as applied to claim 31 above, and further in view of Bos et al., US 6,667,471.

In regard to claim 37, Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, discloses the method of claim 31. The Nakano reference discloses wherein said filter comprises:

filter pane interposed in an optical pathway between said lens and said optical detector (see figure 1).

The Scaduto reference does not disclose wherein said filter pane provides a pass band having a center wavelength that is adjustable over a range of wavelengths in response to a voltage level applied thereto.

Bos et al., US 6,667,471, discloses an imaging system with a electro-optic filter (see figure 8, element 118) provides a pass band having a center wavelength that is adjustable over a range of wavelengths in response to a voltage level applied thereto (see column 11, lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Nakano et al., US 5,986,767, in view of Scaduto, US 6,429,936, and in view of Harrison, US 5,051,768, and further in view of Bos et al., US 6,667,471, wherein said filter pane provides a pass band having a center

wavelength that is adjustable over a range of wavelengths in response to a voltage level applied thereto, in order to reduce the size and number of mechanical parts of the filtering mechanism.

Allowable Subject Matter

8. Claims 18 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 40, 41, and 44-47 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 40, 41, and 44-46, the prior art does not disclose a infrared camera system with the combination of limitations specified in the claimed invention, specifically the limitations of:

wherein said lens, filter, optical channel, optical detector and micro-transmitter are mounted on one of a pair of glasses and a vest wearable by a person, as claimed in claim 40.

In regard to claims 47, the prior art does not disclose an infrared camera system with the combination of limitations specified in the claimed invention, specifically the limitations of:

a filter providing a plurality of pass bands associated with different center wavelengths within an infrared portion of the electromagnetic spectrum, said filter being operable to pass filter optical energy collected by said lens in accordance with any selected one of its plurality of pass bands, said filter comprising a filter disk having a pass

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band associated with a center wavelength that varies in a continuous manner proceeding around a circumference of said disk, said disk being configured for rotation about an axis thereof to interpose a different section of said filter disk in an optical pathway between said lens and said optical detector, wherein the center wavelength of the pass band of said filter disk varies from a shorter wavelength to a longer wavelength in a predetermined increment over a predetermined distance measured along the circumference of said filter disk, and wherein the shorter wavelength is 700 nm, the longer wavelength is 1000 nm, the predetermined increment is 1.2 nm and the predetermined distance is 1 degree of arc, as stated in claim 47.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs



LIN YE
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